

REMARKS

The present application was filed on September 17, 1999 with claims 1 through 22. Claims 1 through 22 are presently pending in the above-identified patent application.

In the Office Action, the Examiner rejected claims 1-22 under 35 U.S.C. §103(a) as being unpatentable over Sayeed (United States Patent Number 6,594,320 B1) in view of Barton et al. (United States Patent Number 6,449,246 B1) .

Independent Claims 1, 7, 13 and 18

Independent claims 1, 7, 13, and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sayeed in view of Barton et al. Regarding claims 1 and 7, the Examiner acknowledges that Sayeed fails to teach storing pilot tones, but asserts that Barton discloses a multicarrier access communication system, wherein pilot tones are used as null symbols (col. 11, lines 48-50).

Applicants note that Barton teaches that, “in practical applications, carrier synchronization is achieved *using pilot-tone-aided or pilot-symbol-aided techniques.*” (Col. 5, lines 51-53; emphasis added.) Thus, Barton distinguishes *pilot tones from pilot symbols*. In the text cited by the Examiner, Barton teaches that, “for ‘Symbol Timing and Carrier Frequency Offset Estimation’, *the pilots are simply null symbols, i.e. 0.*” (Col. 11, lines 48-50; emphasis added.) Applicants note that, in the same paragraph, Barton teaches that “*pilot symbols* are used for both ‘Channel and SINR Estimation’ and ‘Symbol Timing and Carrier Frequency Offset Estimation.’” (Col. 11, lines 39-41; emphasis added.) Applicants, however, could find *no* disclosure or suggestion by Barton that the pilot symbols, or pilots, are pilot tones. (As understood by a person of ordinary skill in the art, a “tone” is a sinusoid of a particular frequency.) Independent claims 1, 7, 13, and 18 require storing said differentially encoded symbols and *one or more pilot tones* to produce an analog signal centered at a desired carrier frequency.

Thus, Sayeed and Barton et al., alone or in combination, do not disclose or suggest storing said differentially encoded symbols and one or more pilot tones to produce an

analog signal centered at a desired carrier frequency, as required by independent claims 1, 7, 13, and 18.

Dependent Claims 2-6, 8-12, 14-17, and 19-22

Dependent claims 2-6, 8-12, 14-17, and 19-22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sayeed in view of Barton et al.

Claims 2-6, 8-12, 14-17, and 19-22 are dependent on claims 1, 7, 13, and 18, and are therefore patentably distinguished over Sayeed and Barton et al., alone or in combination, because of their dependency from independent claims 1, 7, 13, and 18 for the reasons set forth above, as well as other elements these claims add in combination to their base claim.

All of the pending claims, i.e., claims 1 through 22, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,



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